

OKLAHOMA REFINING COMPANY

OKLAHOMA

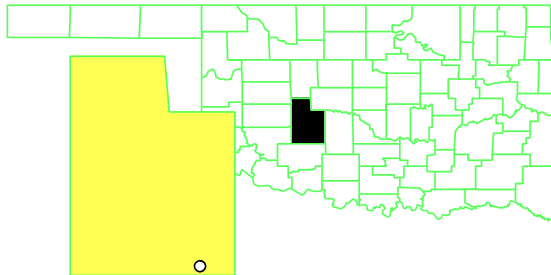
EPA ID# OKD091598870

EPA REGION 6

CONGRESSIONAL DISTRICT 06

Caddo County

Updated: June 2004



Current Status

August 2003 - EPA initiated an emergency removal action on the northern portion of the Site to address drums, lab chemicals, and access controls.

September 2003 - EPA initiated a time-critical removal on the northern portion of the Site to address demolition of various process towers, vessels, buildings, cooling towers, above ground piping, sumps, above ground storage tanks, and asbestos containing materials from pipes and vessels.

Site Description

The Oklahoma Refining Site (Site) is located on South Baskett Street in Cyril in southeastern Caddo County, Oklahoma. Approximately 1,600 people on public or private drinking water wells live within three miles of the Site, with the closest well (private) within 1000 feet of the Site. The 160-acre abandoned Site was a refinery from 1920 until 1984 with wastes in approximately 50 impoundments (many unlined) and several buried waste areas. Shallow ground water beneath the Site flows away from the community and discharges into Gladys Creek at the eastern and northern boundaries of the Site. Area water supplies are provided by Rural Water District wells located several miles away from the City of Cyril and are not affected by the Site.

Site Responsibility: Oklahoma Department of Environmental Quality with EPA as the support agency

NPL Listing History: Proposed Date: 6/24/88

Final Date: 2/21/90

Cleanup Progress

EPA completed remedial action activities on the southern portion of the Site. Completed activities included bioremediation of 92,517 cubic yards of contaminated soil; neutralization of 16,017 cubic yards of contaminated soil; stabilization of 14,401 cubic yards of contaminated soil; removal of 12,000 cubic yards of pitch and asphalt material; and capping and covering on two landfills. Remedial activities have not been initiated on the northern portion of the site.

Site Contacts

Remedial Project Manager

Michael A. Hebert

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Community Involvement Coordinator

1-800-533-3508

PRESENT STATUS AND ISSUES

The EPA completed a 5-year review of the site in July, 2002. The review indicated the remedy is protective in the short term.

August 2003 - EPA initiated an emergency removal action on the northern portion of the Site to address drums, lab chemicals, and access controls.

September 2003 - EPA initiated a time-critical removal on the northern portion of the Site to address demolition of various process towers, vessels, buildings, cooling towers, above ground piping, sumps, above ground storage tanks, and asbestos containing materials from pipes and vessels.

The ODEQ is preparing: 1) a ground water monitoring plan in order to evaluate the condition of ground water at the site, now that all contaminated soil, sediment, and surface water on the southern portion of the site have been addressed, and 2) a Remedial Design for the northern portion of the site contingent upon completion of emergency and time-critical removal actions initiated in the Fall of 2003.

WASTES AND VOLUMES

- Principal pollutants at the Site are found in the following media:
 - Petroleum related organic compounds including benzene, toluene, xylene and phenols and other carcinogenic and non-carcinogenic PAH's.
 - Arsenic and metals including lead, cadmium, and chromium.
 - Acids and caustics.
- Site waste volumes were estimated to be 81,000 cubic yards of contaminated soil and sludge, and 150,000,000 gallons of contaminated ground water.

SITE ASSESSMENT AND RANKING

NPL LISTING HISTORY

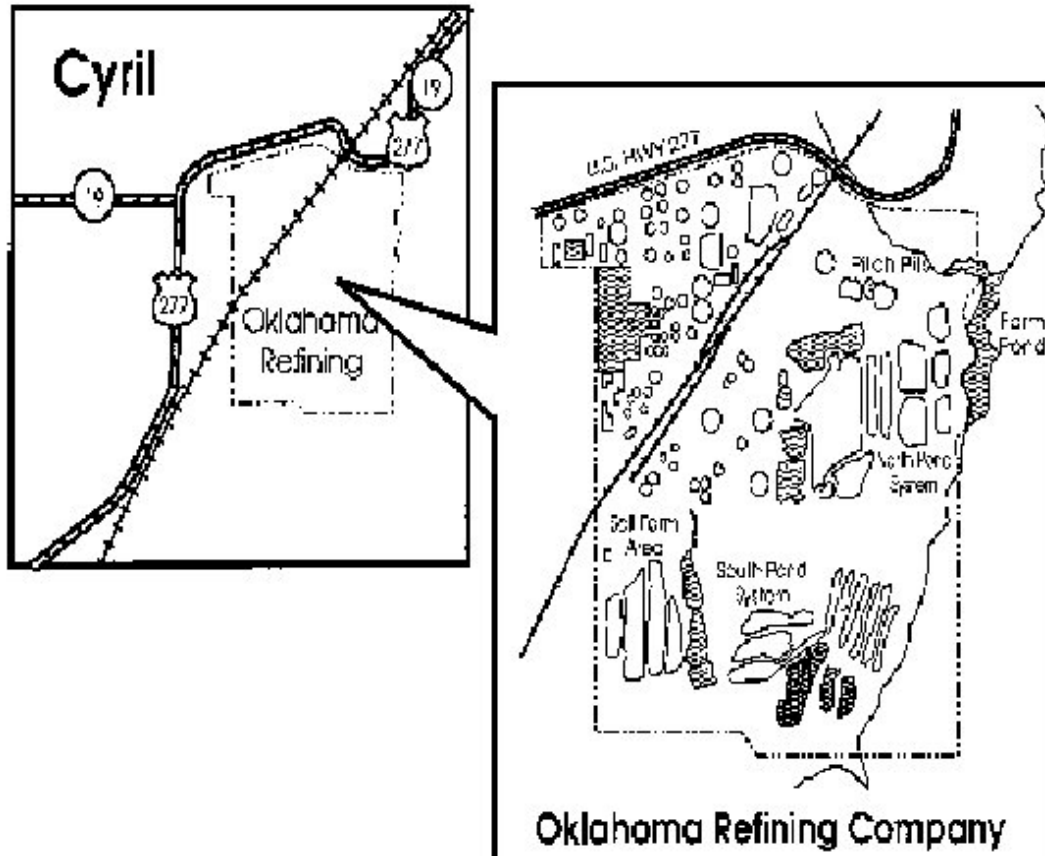
Site HRS Score: 46.01

Proposed Date: 06/24/88

Final Date: 02/21/90

NPL Update: No. 7

SITE MAP AND DIAGRAM



SITE HISTORY

- Anderson-Pritchard Oil Corporation (APCO) operated a refinery at the Site from 1920 until 1978 when the Oklahoma Refining Company (ORC) purchased the facilities. In September 1984 ORC declared Chapter 11 bankruptcy. The bankruptcy court allowed property with majority of waste to be abandoned.
- During operation, Oklahoma Refining Company placed process wastes, including some Resource Conservation and Recovery Act Subtitle C wastes, into pits (many unlined). The refinery also operated a land farm.
- Leachate from the Site, possibly threatening the creeks, was observed in 1981.
- In September 1990, the EPA started removal activities that included: closure of twenty-three abandoned wells, off-site disposal of 18 drums of hazardous waste, installation of netting over API separator pits to protect wildlife, skimming oily waste from ponds to prevent discharge to creek, and construction and repair of the perimeter fence. These activities were completed in June 1992.
- The State of Oklahoma began a remedial investigation/feasibility study in November 1990 to evaluate the extent and magnitude of contamination at the Site.
- Based on these investigations, the EPA selected biological treatment, neutralization, and stabilization of the wastes in a Record of Decision in June 1992.
- The RA began in July 1997, and was completed in October 2001. The Contractor, Philip Services Corporation, completed the bioremediation of 92,517 cubic yards of contaminated soil; completed the neutralization of 16,017 cubic yards of contaminated soil; completed the stabilization of 14,401 cubic yards of contaminated soil; and removed 12,000 cubic yards of pitch and asphalt material. The Contractor completed the cover on both landfills, the landscaping, and seeding of the Site.
- The EPA Resource Conservation and Recovery Act (RCRA) program deferred the north portion of ORC back to the CERCLA (Superfund) program in August 2002.
- August 2003 - EPA initiated an emergency removal action to address drums, lab chemicals, and access controls.

- September 2003 - EPA initiated a time-critical removal on the northern portion of the Site to address demolition of various process towers, vessels, buildings, cooling towers, above ground piping, sumps, above ground storage tanks, and asbestos containing materials from pipes and vessels.
- October 2003 - A second Explanation of Significant Differences (ESD) was signed that: (1) further postponed the LNAPL recovery remedy until a more comprehensive ground water remedy is developed, (2) update remediation requirements to current promulgated standards, and (3) establish a higher cleanup level for Beryllium in soils.

HUMAN HEALTH AND ECOLOGICAL RISK ASSESSMENT

- Direct contact exposure currently to trespassers and workers and to others upon redevelopment of the property.
- Contaminated water discharging to Gladys Creek.

RECORD OF DECISION

Record of Decision

Signed: June 9, 1992

Selected Remedy - Major Components

- In-situ bioremediation of organic contaminated sediments
- In-situ stabilization of inorganic contaminated sediments, followed by capping
- Removal of all on-site surface water from impoundments
- Treatment of all contaminated surface water taken from surface impoundments in an on-site water treatment facility
- Prepared bed biotreatment of contaminated sediments and soils that cannot be treated in-situ, followed by stabilization, if necessary, and containment of treated residuals
- Excavation and containment of contaminated sediments and soils that exceed health-based levels
- Excavation and neutralization of low pH sediments, followed by placement of treated materials as fill in area of origin
- Excavation and recycling of asphaltic materials
- Removal and recycling of the light non-aqueous phase liquid (LNAPL), primarily petroleum, floating on the ground water that has commingled with hazardous waste
- Containment of contaminated ground water by using interceptor wells to prevent migration
- Treatment of all collected water in an on-site water treatment facility. Treated water will be injected into contaminated portions of the aquifer to enhance in-situ bioremediation treatment of the contaminated ground water

Other Remedies Considered:

Ground Water

1. No Action
2. Limited Action
3. Containment, removal of entire LNAPL plume, and onsite bioremediation enhancement of entire Site.
4. Active restoration of entire Site.
5. Active restoration of nonexcluded portion of Site.

Sediment and Surface Soils

1. No Action
2. Limited Action
3. Containment, neutralization, and bioremediation.
4. Bioremediation, containment, onsite stabilization, neutralization.
5. Low temperature thermal desorption, onsite stabilization, neutralization, and recycling.

Explanation of Significant Differences

Signed: March 27, 1996

The significant differences between the revised remedy and the remedy selected in the ROD are: (1) capping in-place of the asphaltic materials rather than recycling; (2) postponement of the ground water portion of the remedy; and (3) a temporary discharge of treated water to Gladys Creek.

Explanation of Significant Differences

Signed: October 16, 2003

During implementation of the remedial action, circumstances dictated that several remedies selected in the ROD would require revision. The significant differences between the revised remedy and the remedy selected in the ROD are: (1) the installation of the LNAPL trench is delayed, until a decision is made on the remediation of the LNAPL plume under the north side of the site; (2) the remedial action objectives for the two railroad loading areas and Tank 177 area are changed from residential to industrial levels, to reflect actual use; (3) the asphaltic waste and pitch waste remedy of capping is changed to the disposal of the asphaltic and pitch wastes, in a permitted landfill facility; (4) the AP-1 waste material remedy is changed from stabilization to placement of the material in the Site hazardous waste landfill; (5) the Toxicity Characteristic Leaching Procedure (TCLP) lead performance standard is increased from 1.5 milligrams per liter (mg/l) to 5.0 mg/l, to bring the remediation requirements in line with promulgated regulatory limits; (6) the remedy of bio-treated soils containing total metals levels exceeding remedial action objectives established for direct contact hazard and/or protection of ground water is changed from chemical stabilization prior to placement to the use of TCLP testing to determine the need for stabilization results in a more protective remedy for soils capped outside the Site landfills, (7) the remedial action objective for beryllium, 1.0 part per million (PPM), is increased to 2.0 ppm in order to eliminate false positives and uncertain quantifications, (8) the remediation on the Tank #1 area is changed from excavation to cover, with eight to twelve inches of clean soil.

COMMUNITY INVOLVEMENT

- Responsibility of Oklahoma Department of Environmental Quality with EPA oversight.
- Community Involvement Plan: Developed 12/89
- Open houses and workshops: 02/90, 01/92, 3/94, 5/96, 7/97, 7/98, 10/98, 4/99
- Original Proposed Plan Fact Sheet and Public Meeting: 02/92
- Original ROD Fact Sheet: 07/92
- Citizens on Site mailing list: 75
- Milestone Fact Sheet: 3/94, 10/94, 4/96, 5/97

Constituency Interest:

- Potential for direct contact with contaminants upon redevelopment of the property.
- Ground water contamination discharging into the creek adjacent to the Site.
- Site Repository is at the Cyril City Hall, 112 West Main Street, Cyril, OK 73029

TECHNICAL ASSISTANCE GRANT

- Availability Notice: 10/89, Re-advertised 08/90, and offered with each Fact Sheet.
- Letters of Intent Received: None
- Grant Award: None
- No apparent citizen interest in a grant.

CONTACTS

Remedial Project Manager (EPA):	Michael Hebert	214-665-8315, EPA (6SF-LP)
State Contact:	Ray Roberts	(405) 702-5137; or
	Angela Brunsman	(405) 702-5135
Attorney (EPA):	Joseph Compton	(214) 665-8506, Mail Code 6RC-S
Community Involvement:	June Hoey	1-800-533-3508, Mail Code 6SF-PO
State Coordinator (EPA):	Roberta Hirt,	(214) 665-8079, Mail code 6SF-LP
EPA Ombudsman:	Arnold Ondarza	1-800-533-3508, EPA (6SF)
Prime Contractors:	Bechtel - RI/FS; Clayton/Mittelhauser	
	RD & RA Oversight; Philip Services Corporation - RA Construction	

ENFORCEMENT

- Special Notice Letter for RI/FS were issued on December 22, 1988. The PRP declined involvement in the RI/FS by letter dated February 7, 1989. The fund lead RI/FS was completed on June 9, 1992.
- Waived Special Notice for RD/RA issued on September 18, 1992. The fund lead RD/RA was completed October 2001.

BENEFITS

- Approximately 153,000 cubic yards of contaminated soil and sludge have been addressed by the selected remedies.
- The property will be suitable for certain types of redevelopment.